



Defendants contend that Professor White's predictive econometric damages model does not address the issue of causation – whether defendants' alleged unlawful conduct caused the alleged overcharge for corrugated sheets and corrugated boxes. Although defendants affirmatively challenge only the “fit” of Professor White's testimony, defendants' arguments also implicate the reliability of Professor White's methodology in the context of establishing antitrust damages. In contrast, defendants do not challenge Professors White's qualifications as an economist or the reliability of predictive modeling in other contexts.<sup>2</sup>

After conducting oral argument and a Daubert hearing<sup>3</sup> on June 14, 2007 and July 2, 2007, the Court concludes that Professor White's damages model fits the facts of this case and is a reliable method of establishing causation of damages in price-fixing cases.<sup>4</sup> Accordingly, his

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<sup>2</sup> Although the Court does not address in detail Professor White's qualifications or the general reliability of predictive modeling, the Court concludes as follows:

First, Professor White is well qualified to testify on damages in antitrust cases. He holds a Ph.D. in economics from the Massachusetts Institute of Technology, is a Professor of Economics at the University of California, San Diego, and is a Founder of Bates White, LLC, a consulting firm. He has published in peer-reviewed academic journals on topics in econometrics and statistics. His book, Asymptotic Theory for Econometricians, is a standard graduate level text in econometrics. Finally, he has testified as an expert and directed economic and statistical analysis of damages in several other multidistrict antitrust cases. White Rpt. at 17.

Second, predictive modeling is a reliable methodology in other contexts. “Articles published in respected peer-reviewed scientific journals report [the use of predictive econometric models] to predict real estate prices, financial earnings, credit risk, marketing and advertising outcomes, payroll expenses, . . . and crop yields.” Opp. at 30.

<sup>3</sup> Under Daubert v. Merrell Dow Pharms., 509 U.S. 579 (1993), this Court must act as a gatekeeper to ensure that Professor White is qualified, that his testimony is reliable, and that his testimony fits the facts of the case.

<sup>4</sup> In ruling upon the Motion to Exclude, the Court did not consider any issues presented by Defendants' Motion for Summary Judgment With Respect to Statutes of Limitations, which asks the Court to dismiss plaintiffs' claims as to a portion of the damages period.

testimony is admissible and defendants' Motion to Exclude is denied. The Court need not and does not address whether Professor White's testimony, standing alone, would be sufficient to support a finding of causation of damages so as to survive a motion for summary judgment.<sup>5</sup>

## **I. BACKGROUND**

The factual background of this case is described in detail in this Court's previous opinions. See, e.g., In re Linerboard Antitrust Litig., 2000 WL 1475559, \*1 (E.D. Pa. Oct. 4, 2000) (denying motion to dismiss); In re Linerboard Antitrust Litig., 203 F.R.D. 197, 201-04 (E.D. Pa. 2001), aff'd, 305 F.3d 145 (3d Cir. 2002), cert. denied, 538 U.S. 977 (2003) (certifying classes of direct purchasers of corrugated boxes and corrugated sheets); In re Linerboard Antitrust Litig., 296 F. Supp. 2d 568 (E.D. Pa. 2003) (approving final class settlement); In re Linerboard Antitrust Litig., 2004 WL 1221350, \*1 (E.D. Pa. Jun. 2, 2004) (awarding class counsel attorney's fees); In re Linerboard Antitrust Litig., 223 F.R.D. 335, 337 (E.D. Pa. 2004) (denying motion to dismiss state claims based on statute of limitations); In re Linerboard Antitrust Litig., 223 F.R.D. 357 (E.D. Pa. 2004) (denying motion under Rule 60 and motion for expedited discovery); In re Linerboard Antitrust Litig., 2005 WL 1625040, \*1 (E.D. Pa. July 11, 2005) (granting motion to remand for lack of subject matter jurisdiction); In re Linerboard Antitrust Litig., 443 F. Supp. 2d 703 (E.D. Pa. 2006) (granting motion for summary judgment against one direct action plaintiff). Accordingly, the Court sets forth only those facts necessary to resolve defendants' Motion to Exclude.

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<sup>5</sup> See Callahan v. A.E.V., Inc., 182 F.3d 237, 256 (3d Cir. 1999) (Becker, J.) (The "expert's testimony, although admissible evidence, was insufficient by itself to prove that the antitrust violations had in fact caused [the] losses.") (summarizing Stelwagon Mfg. Co. v. Tarmac Roofing Systems, Inc., 63 F.3d 1267 (3d Cir. 1995)).

**A. Overview**

Plaintiffs in this case purchased corrugated products from defendants.<sup>6</sup> According to plaintiffs, defendants “conspired to raise the price of corrugated containers and corrugated sheets throughout the United States by restricting production and/or curtailing inventories in violation of federal antitrust laws.” In re Linerboard Antitrust Litig., 223 F.R.D. 357, 359 (E.D. Pa. 2004). Specifically, plaintiffs allege that defendant Stone Container Corporation (“Stone”)

devised a strategy to invite its competitors to increase the price of linerboard. As part of this strategy, Stone planned to take downtime at its plants to reduce its production and inventory of linerboard substantially, and contemporaneously to purchase substantial amounts of linerboard from competitors--actions which, plaintiffs allege, were extraordinary, and not in the regular course of business.

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The concerted actions of the defendants in taking downtime at the mills producing linerboard, and then increasing the price of linerboard, resulting in price increases for corrugated sheets and corrugated boxes, forms the basis of the conspiracy at issue in this case.

In re Linerboard Antitrust Litig., 203 F.R.D. 197, 204 (E.D. Pa. 2001).

In its Memorandum addressing class certification, the Court explained that the conspiracy alleged in this case is tantamount to a price-fixing agreement. “An agreement on output also equates to a price-fixing agreement. If firms raise prices, the market’s demand for their product will fall, so the amount supplied will fall too--in other words, output will be restricted. If instead firms restrict output directly, price will as mentioned rise in order to limit demand to the reduced

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<sup>6</sup> The class action components of MDL 1261 have been settled. In re Linerboard Antitrust Litig., 292 F. Supp. 2d 631 (E.D. Pa. 2003). One-hundred and forty entities opted out of the classes. Thirteen groups of opt-outs subsequently filed direct actions against defendants. In re Linerboard Antitrust Litigation, 443 F. Supp. 2d 703, 707 (E.D. Pa. 2006). The claims against all defendants other than defendants Temple-Inland, Inc. (“Temple-Inland”) and Gaylord Container Corp. (“Gaylord”) have either been settled or withdrawn. Id. This Memorandum pertains to the remaining direct action plaintiffs and defendants Temple-Inland and Gaylord.

supply.” Id. at 216 (citing 216 Westinghouse Elec. Corp. v. Gulf Oil Corp., 588 F.2d 221, 226 (7th Cir. 1978)).

## **B. Discussion of Impact at the Class Certification Stage**

To demonstrate that the questions of law and fact common to the members of the class predominated over any questions affecting only individual members, the Court applied a presumption of impact known as the “Bogosian short-cut”:

If, in this case, a nationwide conspiracy is proven, the result of which was to increase prices . . . beyond the prices which would obtain in a competitive regime, an individual plaintiff could prove fact of damage<sup>7</sup> simply by proving that the free market prices would be lower than the prices paid and that he made some purchases at the higher price.”

Id. (citing Bogosian v. Gulf Oil Corp., 561 F.2d 434, 454 (3d Cir. 1977)).

The Court also briefly addressed plaintiffs’ “econometric models to be used to establish impact.” Id. at 218. Specifically, the Court examined the affidavit of Dr. John C. Beyer, plaintiffs’ economic expert. As the Third Circuit explained in affirming the Court’s class certification,

In discussing . . . feasible approaches[] which could be used to provide quantitative methods for corroborating his opinion on impact and for estimating damages, [Dr. Beyer] suggested as a potential benchmark[] the potential prices charged for linerboard during a competitive period when there would be no effects of the conspiracy. He explained that the necessary data was available to do the analysis and described the types of data he would use. He discussed also a multiple regression model<sup>8</sup> to isolate the effects of

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<sup>7</sup> The “fact of damage” is the impact of the unlawful activity. See In re Linerboard Antitrust Litigation, 203 F.R.D. 197, 214 (E.D. Pa. 2001) (citing Lumco Indus., Inc. v. Jeld-Wen, Inc., 171 F.R.D. 168, 172 (E.D. Pa.1997)).

<sup>8</sup> Multiple regression analysis is a statistical tool for understanding the relationship between two or more variables . . . . [It] is sometimes well suited to the analysis of data about competing theories in which there are several possible explanations for the relationship among a number of explanatory variables . . . . [It] may also be useful (1) in determining whether a particular effect is present; (2) in measuring

various influences on corrugated container prices, thereby allowing a determination of the impact of any one of the variables, including, in this case, the impact of the conspiracy.

In re Linerboard Antitrust Litig., 305 F.3d 145, 154 (3d Cir. 2002).

## II. PROFESSOR WHITE'S ECONOMETRIC MODEL

Direct-action plaintiffs retained Professor White to opine on the extent to which the alleged conspiracy caused them to pay higher prices for corrugated containers.<sup>9</sup> White Rpt. ¶ 1. The objective of Professor White's analysis was "to estimate 'but-for' prices of corrugated containers and sheets, that is, the prices that would have prevailed but for the existence of the alleged conduct, covering every affected purchase for each plaintiff in this matter." Id. ¶ 120. In other words, Professor White estimated "but-for prices consistent with the level of competition and interaction of market forces that prevailed when the alleged conduct was not in effect." Id. To accomplish this, Professor White developed an "econometric model that relates product prices to the underlying costs and demand shifters in the industry using data that exclude the period of the alleged conduct. [He] then appl[ied] this relationship to estimate what prices would have been during the period of the alleged conduct, had they followed the relationship estimated outside the alleged conduct period." Id.

The econometric model that Professor White developed and applied was a "prediction

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the magnitude of a particular effect; and (3) in forecasting what a particular effect would be, but for an intervening event.

In re Linerboard Antitrust Litig., 203 F.R.D. 197, 219 (E.D. Pa. 2001).

<sup>9</sup> Specifically, Professor White's "charge [was] to determine the extent to which direct action plaintiffs were overcharged . . . *as a result of* an alleged price fixing conspiracy to restrict the supply of linerboard and corrugated medium and to elevate the prices of linerboard, corrugating medium, and corrugated product in the United States." White Rpt. ¶ 1 (emphasis added).

model.” “A prediction model captures the statistical relationship between prices and cost, demand, and other potentially predictive factors.” Id. ¶ 126.

Prediction models . . . are fundamentally different than causal models (also known as “structural” models). Whereas causal models are intended to measure the ceteris paribus effects of specific economic factors, the purpose of a prediction models is to accurately predict outcomes that would be observed during a period of interest. Prediction models account for unobservable causal factors by the use of suitable proxies.

Id. ¶ 130. “By constructing the prediction model using data that exclude the alleged conduct period, [Professor White] obtain[ed] a model that reflects the predictive relationship between prices and predictive factors in the absence of the alleged conduct.” Id. ¶ 126.

To select the relevant predictive factors for his regression equation,<sup>10</sup> Professor White first “identified a set of candidate predictor variables using economic theory and an understanding of the relevant market.” Id. ¶ 127. He then “used a statistical criterion, cross-validation, to select from these candidate variables a subset of predictors that delivers superior accuracy. This method involves repeatedly holding out part of the data to measure the predictive ability of a given set of predictors.” Id.

“Among the predictive factors [Professor White] did not include are economic variables subject to the control of the defendants such as inventory levels or downtime that was taken for market purposes. Nor did [Professor White] include other variables whose values would be affected by the alleged coordinated action of the defendants, such as the price of recycled corrugated containers.” Id. ¶ 129. Specifically, Professor White excluded inventories, capacity,

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<sup>10</sup> Professor White “estimated the prediction model using standard ridge regression methods,” which “has a long history of use in statistics and econometrics.” Id. ¶ 134. A regression equation consists of “a set of coefficients that are associated with each of the variables” selected for the equation. July 2, 2007 Tr. at 50.

capacity utilization, non-incident downtime,<sup>11</sup> number of suppliers, and the cost of recycled corrugated containers (“OCC”). July 2, 2007 Tr. at 27-28. According to Professor White, “use of actual values of such variables [could] have [had] the effect of absorbing part or all of the effect of the alleged conduct and is therefore clearly inappropriate.” White Rpt. ¶ 129. Instead, Professor White utilized “predictors that drive the values of the potentially affected variable but that are not themselves affected by the alleged coordinated action of the defendants.” Id.

After Professor White estimated but-for prices, he calculated overcharges by subtracting the but-for price from the allegedly elevated prices paid by plaintiffs for corrugated products during “the damages period, i.e. from December 1993 through May 1997.” Id. ¶ 182. Professor White concluded that the “overcharges from Temple-Inland and Gaylord for all purchases for the plaintiffs were \$109.4 million during the damage period.” Id. ¶ 183. Applying the U.S. bank prime loan rate (averaging seven percent from 1993 to August 2006), Professor White further calculated that “the present value of plaintiffs’ damages . . . associated with purchases from Temple-Inland and Gaylord total \$228.1 million during the damage period.” Id. ¶ 185. According to Professor White, this figure “represents the total payments required to restore the plaintiffs to the same financial position that they would have enjoyed but for the defendants’

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<sup>11</sup> Incident downtime is involuntary downtime taken by the defendants that is caused, for example, by mill accidents or regulatory shutdowns. See July 2, 2007 Tr. at 28-28, 91-92. Professor White “was careful to distinguish between incident downtime . . . and non-incident downtime.” Id. at 98.

By including the incident downtime in [his] model, [he] was able to build a prediction that took into account, using the underlying drivers of cost and demand, what the presumably lawful and more competitive behavior with regard to other types of downtime, market downtime, maintenance downtime, would be during the benchmark period, and that’s what’s relevant for the purpose of constructing the but-for line. Id.



alleged illegal cartel.” Id.

### III. STANDARD OF REVIEW

Federal Rule of Evidence 702 governs the admissibility of expert testimony. The rule provides as follows:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

“Faced with a proffer of expert scientific testimony . . . the trial judge must determine . . . whether the expert is proposing to testify to (1) scientific knowledge that (2) will assist the trier of fact to understand or determine a fact in issue.” Daubert v. Merrell Dow Pharms., 509 U.S. 579, 592 (1993). This gatekeeping function extends beyond scientific testimony to testimony based on “technical” and “other specialized” knowledge. Kumho Tire Co., Ltd. v. Carmichael, 526 U.S. 137, 141 (1999).

“Rule 702 embodies three distinct substantive restrictions on the admission of expert testimony: qualifications, reliability, and fit.” Elcock v. Kmart Corp., 233 F.3d 734, 741 (3d Cir. 2000) (citing In re Paoli R.R. Yard PCB Litig., 35 F.3d 717 (3d Cir. 1994)). The party offering the expert must prove each of these requirements by a preponderance of the evidence. In re TMI Litig., 193 F.3d 613, 663 (3d Cir. 1999).

Defendants affirmatively challenge only the “fit” of Professor White’s testimony.<sup>12</sup> For

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<sup>12</sup> Defendants state as follows in their motion: “Defendants do not question Prof. White’s qualifications as an economist or the application of his methodology in *other* contexts. Rather Defendants question whether the methodology Professor White chose ‘fits’ the facts in *this* case and Plaintiffs’ theory of *this* case.” Def.’s Mot. at 11. Defense counsel repeatedly stressed

expert testimony to meet the “fit” requirement, it must “assist the trier of fact to understand the evidence or to determine a fact in issue.” Fed. R. Evid. 702. “This condition goes primarily to relevance. Expert testimony which does not relate to any issue in the case is not relevant and, ergo, non-helpful.” Daubert, 509 U.S. at 591 (citing United States v. Downing, 753 F.2d 1224, 1242 (3d Cir. 1985) (quotations omitted). “‘Fit’ is not always obvious, and scientific validity for one purpose is not necessarily scientific validity for other, unrelated purposes.” Daubert, 509 U.S. at 591.

In its reconsideration of Daubert on remand from the Supreme Court, the Ninth Circuit explained as follows:

The Supreme Court recognized that the “fit” requirement “goes primarily to relevance,” but it obviously did not intend the second prong of Rule 702 to be merely a reiteration of the general relevancy requirement of Rule 402. In elucidating the “fit” requirement, the Supreme Court noted that scientific expert testimony carries special dangers to the fact-finding process because it “can be both powerful and quite misleading because of the difficulty in evaluating it.” Federal judges must therefore exclude proffered scientific evidence under Rules 702 and 403 unless they are convinced that it speaks clearly and directly to an issue in dispute in the case, and that it will not mislead the jury.

Daubert v. Merrell Dow Pharmaceuticals, Inc., 43 F. 3d 1311, 1321 (9th Cir. 1995).

As the Third Circuit recently stated, “[a]lthough we do not adopt the apparent presumption of exclusion enunciated by the Ninth Circuit, we agree with the spirit of our sister court’s exhortation. In particular, district courts should tread carefully when evaluating proffered expert testimony, paying special attention to the relevance prong of Daubert.” United States v. Ford, 481 F.3d 215, 220 n.6 (3d Cir. 2007). The Third Circuit further explained that

The discussion of “fit” in Paoli indicated that the standard for analyzing the fit of an expert’s analysis to the case at hand is “not that high,” but is “higher than bare relevance.”

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during the Daubert hearing that defendants were only making a “fit” challenge.

That statement remains sound law inasmuch as it requires that experts who purport to apply their principles and methods to the facts of the case do so in a reliable manner. The Paoli Court's discussion of fit requires that expert opinions that apply principles or methods to the facts of the case and produce conclusions that have a debatable connection to the question in issue be predicated on a reliable methodology. This is the critical import of Paoli's discussion of fit within the context of reliability. Outside of this relatively narrow setting, "fit" is a relevance concern.

Id. (citing Paoli, 35 F.3d at 745).

As in Paoli, defendants' fit arguments in fact implicate the reliability of Professor White's methodology in certain respects. For example, defendants argue that it was inappropriate for Professor White to apply a cross-validated root mean squared error method<sup>13</sup> in selecting variables for his regression equation, and that Professor White incorrectly assumed that his benchmark period was free of collusion. July 2, 2007 Tr. at 115.

"Under the liberal Daubert standard, the plaintiffs do not have to prove to the judge by a preponderance of the evidence that their expert's testimony is correct, they must only show that it is reliable. The requirement of reliability is lower than the standard of correctness." United States v. Williams, 2007 WL 1643197, \*3 (3d Cir. Jun. 7, 2007) (citing Daubert, 509 U.S. at 590). "The judge does not have to determine that these methods are necessarily the best grounds to ascertain certain facts, but only that the evidence presented will help the trier of fact." Id.

"Once the foundation for admissibility required by Daubert has been established,

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<sup>13</sup> Professor White explained that the cross-validated root mean squared error is

a measure of the squared error which is a measure of how well or poorly you're doing. The bigger the squared error, the worse you're doing, the smaller the better, on average the word "mean" conveys that. So it's the average squared error that is achieved when you apply the prediction equation to data that haven't been seen for purposes of estimation.

July 2, 2007 Tr. at 45.

concerns about the validity of an expert's conclusions should not result in the exclusion of the expert's testimony. Rather, such concerns should be presented to the jury through cross examination, presentation of contrary evidence and careful instruction on the burden of proof." Id.

## V. DISCUSSION

### A. Overview

According to defendants, Professor White's model "is simply not helpful, because he has not done the analysis and rendered an opinion as to how that difference in price is connected to the specific conspiracy in this case." Reply at 7. Defendants' Motion to Exclude focuses on the following three arguments:

- (1) Professor White fails "to link the alleged price increase . . . to the allegedly wrongful conduct . . . and to exclude the possibility that legitimate factors, such as costs, capacity constraints, or increase in demand caused that increase in price." Mot. at 1.
- (2) Professor White "removed *all* variables that could be affected by Defendants' conduct - lawful or unlawful" such that there is "no way to isolate the pricing effect of *lawful* conduct from that of unlawful conduct." Reply at 11-12.
- (3) Professor White "fails to quantify the degree to which any economic factor—downtime, restricted production, or other—affected prices during the relevant period" and "ignores the timing and quantity of downtime taken . . . ." Mot. at 3.

These arguments are distinct but present interrelated issues. The first argument pertains to

controlling for exogenous economic factors (factors outside of defendants' control, such as demand), while the second argument pertains to disaggregation of defendants' lawful and allegedly unlawful conduct (factors within defendants' control).<sup>14</sup> The third argument pertains to disaggregation of specific acts alleged to be unlawful, and relating damages to those specific unlawful acts.<sup>15</sup>

Based on these arguments, defendants contend that Professor "White is unable to opine as to how (or even whether) the alleged unlawful conduct affected prices . . . ." Mot. at 3. The Court disagrees. First, Professor White's econometric damages model properly controls for exogenous factors by incorporating all relevant "aspects of the economic reality of the [linerboard] market . . . ." Concord Boat Corp. v. Brunswick Corp., 207 F.3d 1039, 1057 (8th Cir. 2000). Second, Professor White's econometric damages model "separate[s] lawful from unlawful conduct." Id. Third, it was unnecessary for Professor White to particularize the effect

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<sup>14</sup> Suppose that an antitrust defendant has engaged in multiple activities that have imposed some injury on the plaintiff. If some of the defendant's conduct is lawful and some is unlawful, the damage claim will have to be disaggregated. The reason for this is clear: . . . a plaintiff may recover a damage award that will return him to the financial position that he would have enjoyed but for the unlawful conduct. . . . *The disaggregation requirement is distinct from the requirement that the plaintiff's damage calculations must control for exogenous factors that also have an adverse impact on the plaintiff's economic condition.*

Phillip E. Areeda & Herbert Hovenkamp, Antitrust Law: An Analysis of Antitrust Principles and Their Application ¶ 391g (2d ed. 2000) (emphasis added).

<sup>15</sup> Defendants distinguish between their arguments in a manner different from the approach taken by the Court. They state that Professor White's method: "(1) ignores the timing and quantity of downtime taken; (2) ignores other lawful factors that affected prices during the relevant period; and (3) fails to quantify the degree to which any economic factor – downtime, restricted production, or other – affected prices during the relevant period." Mot. at 3. The Court addresses each of these arguments in its analysis.

that any one variable, such as downtime or inventories, had upon prices. LePage's Inc. v. 3M, 324 F.3d 141 (3d Cir. 2003). The Court need not and does not address whether Professor White's testimony, standing alone, would be sufficient to support a finding of causation of damages so as to survive a motion for summary judgment.

During the Daubert Hearing, defense counsel also argued that Professor White incorrectly assumed that his benchmark period was free of collusion. July 2, 2007 Tr. at 87. This argument is unavailing because, assuming that the benchmark period was not perfectly competitive, Professor White's damages calculation actually becomes a more conservative estimate. That is, if there was in fact collusion during the benchmark period, Professor White's but-for price estimate would be too high, causing his estimate of the overcharge (the difference between actual prices and but-for prices) to be too low.

#### **B. Legal Standard: Causation of Damages in Antitrust Cases**

"A consumer alleging antitrust violations cannot obtain damages without showing that he actually paid more than he would have paid in the absence of the violation." City of Pittsburgh v. West Penn Power Co., 147 F.3d 256, 265 (3d Cir. 1998) (citing Phillip E. Areeda & Herbert Hovenkamp, Antitrust Law, at 200 (1995) (noting that "determining whether antitrust injury is present necessarily involves examining whether there is a causal connection between the violation alleged and the injury")). Thus, "one pursuing antitrust recovery must establish that the damages suffered were caused by the defendant's participation in a scheme repugnant to the antitrust laws." In re Lower Lake Erie Iron Ore Antitrust Litig., 998 F.2d 1144, 1176 (3d Cir. 1993) (citing Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc., 429 U.S. 477 (1977)).

In price-fixing cases, "causation of injury may be found as a matter of just and reasonable

inference from proof of defendants' wrongful acts and their tendency to injure plaintiffs, and from evidence of change in prices not shown to be attributable to other causes." In re Indus. Silicon Antitrust Litig., 1998 WL 1031507, \*4 (W.D. Pa. Oct. 13, 1998) (citing In re Aluminum Phosphide Antitrust Litig., 893 F. Supp. 1497, 1499 (D. Kan. 1995) (citing Bigelow v. RKO Radio Pictures, Inc., 327 U.S. 251, 262-64 (1946))) (emphasis added).

"Once causation is determined, . . . the actual amount of damages may result from a 'reasonable estimate, as long as the jury verdict is not the product of speculation or guess work.'" Lower Lake Erie, 998 F.2d at 1176 (citing MCI Communications Corp. v. Am. Tel. & Tel. Co., 708 F.2d 1081, 1161 (7th Cir. 1983)). "The relaxed measure of proof is afforded to the amount, not the causation of loss--the nexus between the defendant's illegal activity and the injuries suffered must be reasonably proven." Id. However, a plaintiff's "burden of proving the fact of damage . . . is satisfied by its proof of *some* damage flowing from the unlawful conspiracy; inquiry beyond this minimum point goes only to the amount and not the fact of damage. It is enough that the illegality is shown to be a material cause of the injury; a plaintiff need not exhaust all possible alternative sources of injury . . . ." Danny Kresky Enter. Corp. v. Magid, 716 F.2d 206, 209-10 (3d Cir. 1983).

Importantly, Daubert does not require a plaintiff to prove causation of damages "twice--they do not have to demonstrate to the judge by a preponderance of the evidence that the assessments of their experts are *correct*, they only have to demonstrate by a preponderance of evidence that their opinions are reliable" and fit the facts of the case. Paoli, 35 F.3d at 744. "[P]laintiffs must be free to select their own [antitrust] damages theories as long as they are supported by a reasonable foundation." Danny Kresky, 716 F.2d at 213.

Indeed, the Third Circuit has made clear that the standard for admitting expert testimony on antitrust damages is lower than a plaintiff's burden of proof in establishing antitrust damages. That dichotomy presents the same issues as are argued by the defendants in this case. They were explained by the Third Circuit in Stelwagon Mfg. Co. v. Tarmac Roofing Systems, Inc., 63 F.3d 1267 (3d Cir. 1995), which criticized the damages expert in much the same way that defendants criticize Professor White:

Significantly, Dr. Perry's analysis failed to sufficiently link any decline in Stelwagon's MAPs sales to price discrimination. The sales may have been lost for reasons apart from the price discrimination-reasons that Dr. Perry's analysis apparently did not take into account. For example, the evidence showed that Stelwagon had higher overhead costs than its competitors. In addition, there was undisputed evidence that Stelwagon experienced other business complications during the relevant time period. In 1988, for example, Stelwagon terminated a vice-president, two territorial managers and three key employees for their part in an embezzlement scheme.

Id. at 1275. Nevertheless, the Third Circuit clearly stated that the expert's damages testimony was admissible:

Although we do not agree with [defendant's] contention that the district court erred in admitting [the expert] testimony, or in failing to strike the testimony in response to a motion by [defendant] at the conclusion of the direct examination, we do agree that, standing alone, the expert's opinions, as reflected in his testimony and report, are insufficient to support the finding of actual damage.

Id.; see also Callahan v. A.E.V., Inc., 182 F.3d 237, 256 (3d Cir. 1999) (Becker, J.) (summarizing Stelwagon, 63 F.3d at 1275) (The "expert's testimony, although admissible evidence, was insufficient by itself to prove that the antitrust violations had in fact caused [the] losses.")



### C. Analysis of Defendants' Arguments

#### 1. Incorporation of Exogenous Factors (Factors Beyond Defendants' Control)

Defendants argue that Professor White fails “to link the alleged price increase . . . to the allegedly wrongful conduct . . . and to exclude the possibility that legitimate factors, such as costs, capacity constraints, or increase in demand caused that increase in price.” Mot. at 1. In other words, defendants argue that Professor White’s “damage calculations [do not] control for exogenous factors that [could] have an adverse impact on the plaintiff’s economic condition[,]” a question related to but distinct from the question whether Professor White’s model disaggregates the effects of defendants’ lawful conduct from defendants’ unlawful conduct. Areeda & Hovenkamp, Antitrust Law ¶ 391g. The Court rejects this argument because Professor White’s model properly accounted for exogenous factors such as cost, capacity constraints, and demand. In short, Professor White explained that it did not matter what specific demand, cost, or capacity variables were included or excluded from his regression equation, as long as tainted variables were excluded and the regression equation closely predicted actual prices during the benchmark period.

##### a. Problems With “But-For” Models

With respect to accounting for exogenous factors, the Third Circuit has specifically addressed the potential problems of “but for” econometric models in proving causation of antitrust damages, albeit not in the context of price-fixing conspiracies. As explained in Rossi v. Standard Roofing, Inc., 156 F.3d 452 (3d Cir. 1998) (Becker, J.), “but for” models

do not attempt to measure the particularized effects of any specific alleged illegal practices, but rather rely on an aggregation of injury from all factors. Second, their

hypothetical “but for” calculations usually rely upon unrealistic *ex ante* assumptions about the business environment, such as assumptions of perfect knowledge of future demand, future prices, and future costs that tend to overstate the plaintiff’s damage claim. Thus, using a “but for” damage model arguably makes it impossible for the trier of fact to determine what, if any, injury derived from the defendant’s antitrust violations as opposed to other factors, and courts sometimes reject such models as the basis of either causation or amount of injury.

Id. at 485 (citations omitted). In that case, noting that the expert’s damages model was “much less speculative” than other “but for” damages models, the Third Circuit found it inappropriate to exclude the model even though it did “not deal with the particularized effects of specific injuries, but rather aggregate[d] all . . . damages into one figure.” Id. at 485-86. The Court further found that various extrinsic factors, not incorporated into plaintiff’s model, were insufficient to warrant exclusion of plaintiff’s model.<sup>16</sup> See id.

The Third Circuit again “considered the sufficiency of expert evidence offered as proof of causation in antitrust cases” in Callahan, 182 F.3d at 256. In that case, “defendants criticize[d] [plaintiffs’ expert] report for failing to take into account potential alternative causes for the plaintiffs’ losses *not attributable to the defendants’ actions*.” Id. at 258 (emphasis added). Specifically, “defendants contend[ed] that . . . the expert’s report was inadequate because it failed

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<sup>16</sup> Although the Rossi court did not explicitly state that the expert report was admissible, it considered the expert report and stated as follows:

We do not agree with the defendants’ reading of these cases (and, at all events, are not bound by them), which we conclude only stand for the proposition that some, not all, “but for” models are too speculative and must be precluded as a matter of law. The Rockhill Report, as we shall see, is much less speculative and does not suffer from many of the flaws in the damage models discussed in Van Dyk Research and Southern Pacific, and thus it is not comparable with them.

Rossi, 156 F.3d at 485-86.

to consider alternative causes, so we must find [the] report inadequate because he failed to consider certain specific factors that might have affected the plaintiffs' business success, such as general economic conditions, changes in their operations during the relevant time period, or changes in costs." Id. The Third Circuit rejected this argument, noting that plaintiffs did "discuss some of these factors the defendants suggest he should have--including general economic conditions--albeit not to the degree the defendants might prefer." Id. The Court "found the export's [sic] report acceptable in spite of certain gaps," and stated that the factors "involve factual disputes that need to be resolved by the trier of fact, not by this court . . . ." Id. (quoting Rossi, 156 F.3d at 487).<sup>17</sup>

In the context of price-fixing cases, several other courts have recognized that "[m]erely pointing to economic conditions that may affect the dependant variable is not enough to call into question the reliability of an econometric model." In re Polypropylene Carpet Antitrust Litig., 93 F. Supp. 2d 1348 (N.D. Ga. 2000) (citing In re Indus. Silicon Antitrust Litig., 1998 WL 1031507,

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<sup>17</sup> Also instructive on this point is J.F. Feeser, Inc. v. Serv-A-Portion, Inc., 909 F.2d 1524, 1540 (3d Cir. 1990), a Third Circuit case that discusses the Supreme Court's decision in Texaco Inc. v. Hasbrouck, 496 U.S. 543, 572 (1990):

To estimate its lost sales at trial, Hasbrouck's expert presented a market analysis comparing Hasbrouck's actual prices, volumes and profits to its estimated amount absent the discrimination. The expert utilized economic projections based upon various assumptions such as assuming Texaco did not offer a favored price to its competitors and assuming that Texaco lowered its price to Hasbrouck.

On appeal, the Supreme Court decided that:

*[e]ven if some portion of some of the respondent's injuries may be attributable to the conduct of independent retailers, the expert testimony nevertheless provided a sufficient basis for an acceptable estimate of the amount of damages.*

J.F. Feeser, 909 F.2d at 1540 n. 16 (citing Texaco, 496 U.S. at 572).

at \*3 (W.D. Pa. Oct. 13, 1998)). In that case, the court explained that

Unless the party challenging a regression model proffers evidence that an omitted variable “is correlated with the dependant variable and is likely to affect the result of the regression analysis,” the Court will not find that omission of the variable implicates the reliability of the model.

Id. at 1365 (citation omitted). “It is only the rare case where the ‘regressions are so incomplete as to be irrelevant’ and the expert’s decisions regarding control variables are the basis to exclude the analysis.” Gutierrez v. Johnson & Johnson, 2006 WL 3246605, \*5 (D.N.J. Nov. 6, 2006) (“The Court is unpersuaded that [the expert’s] choice of variables renders her analysis so fatally flawed that it should be stricken as a matter of law.”).

These decisions are based on Bazemore v. Friday, 478 U.S. 385 (1986), in which the Supreme Court addressed omission of variables from regression analyses proffered to establish discrimination. The Fourth Circuit concluded that a regression analysis was “unacceptable as evidence of discrimination, because they did not include ““all measurable variables thought to have an effect on salary level.” Id. (quotations omitted). Finding this “view of the evidentiary value of the regression analyses . . . plainly incorrect[,]” the Supreme Court explained,

While the omission of variables from a regression analysis may render the analysis less probative . . . , it can hardly be said, absent some other infirmity, that an analysis which accounts for the major factors must be considered unacceptable . . . . Normally, failure to include variables will affect the analysis’ probativeness, not its admissibility.

Id. at 400 (quotation omitted). “There may, of course, be some regressions so incomplete as to be inadmissible as irrelevant . . . .”<sup>18</sup> Id. at 400 n.10.

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<sup>18</sup> Other circuits interpret Bazemore to require a defendant to introduce “evidence to support the contention that the missing factor would explain the existing disparities” revealed by the regression analysis. Palmer v. Shultz, 815 F.2d 84, 101 (D.C. Cir. 1987); Sobel v. Yeshiva Univ., 839 F.2d 18, 33-34 (2d. Cir. 1988). Several courts in the Third Circuit have taken this approach. Churchill v. Int’l Bus. Machines, Inc., Nat’l Serv. Div. U, 759 F. Supp. 1089, 1099 (D.N.J. 1991); Lanning v. Southeastern PA Transp. Auth., 1998 WL 341605, \*66 (E.D. Pa. Jun.

Defendants apparently concede that “conflicts between parties or experts over which variables are the proper variables to include in a model or which variables should be given more weight are simply issues of fact to be considered by juries.” Reply at 16. According to defendants, they are “not quibbling with the variables, . . . that wouldn’t be an appropriate Daubert challenge and we’ve never done that.” July 2, 2007 Tr. at 178. This is directly at odds with defendants’ argument that Professor White’s model did not account for legitimate factors affecting price such as costs, capacity constraints, or increase in demand.

**b. Incorporation of Exogenous Factors into Professor White’s Model**

In this case, Professor White testified that he did incorporate all appropriate cost and demand factors. On the cost side, Professor White’s regression equation included the following variables: woodchips, labor, coal, electric power, natural gas, oil railroad transportation, diesel fuel, caustic soda, sulfuric acid, sodium carbonate/sulfate, 3-month treasury bill, 10-year treasury note, and incident downtime. On the demand side, Professor White’s regression equation included the following variables: U.S. durable and non-durable industrial production indices, foreign industrial production indices and exchange rates, and the price index for plastic packaging products (a substitute for packaging products made from corrugated cardboard).

In contrast, Professor White excluded from his equation inventories, capacity, capacity utilization, non-incident downtime, number of suppliers, cost of recycled corrugated containers (“OCC”), and the paper component of the U.S. nondurable industrial production index. July 2, 2007 Tr. at 27-28. As evinced by Professor White’s testimony during the Daubert hearing, it was

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25, 1998), rev’d on other grounds, 181 F.3d 478 (3d Cir. 1999).

appropriate for him to exclude these variables, because they were either tainted or duplicative.

See Gutierrez, 2006 WL 3246605, at \*6 (holding that an expert “exercised professional judgment in deciding what control variables to include in her analysis”). Moreover, he testified that the excluded variables were accounted for in his model indirectly, through proxy variables. The Court sets forth a small portion of Professor White’s lengthy testimony on this issue:

Q. Does the fact that only some variables were selected mean that your prediction equation, your multiple regression equation, takes no account of the variables that were not selected?

A. Not at all. . . . [A]s I explained earlier, the purpose of the ensemble is to give the best prediction that includes not too many variables and not too few. The variables that are included act on their own together with the other variables that are included but they also act as proxies for other variables that don’t make the grade. The reason those other variables don’t make the grade is that the information that they contain is already included in the ensemble that I select.

\* \* \*

Q. Does the fact that the durable production variable [which accounted for roughly 23 percent of demand] was not selected [mean] that your model has nothing to do with reality?

A. Absolutely not. . . . [A]s I’ve just explained, the variables that are included act for themselves but also as proxies for other variables that are not included. And if a variable isn’t included it’s because its information is already contained in the ensemble. So, in essence, it’s redundant to put it in again.

Id. at 47-48; see also id. at 41-42.

Professor White testified similarly with respect to his rationale for excluding capacity from his prediction equation. Although Professor White did not include capacity “in the model as an explicit variable” because it was tainted by the conspiracy,

it is included indirectly through the process by which I modeled the but-for price during the benchmark period. So that even though capacity as a tainted variable isn’t taken account of, the benchmark behavior of capacity, which is presumably lawful and more competitive, is taken into account, and I also described the exercise earlier this morning where I included that capacity and found that it didn’t have much of an impact, if any, on the ultimate but-for prices.

July 2, 2007 Tr. at 80-82.

Moreover, in response to defendants' arguments, Professor White reran a number of variables in his model that defendants claim were overlooked. In doing so, he included containerboard capacity, containerboard inventories at mills, containerboard inventories at box plants, total containerboard inventories, and OCC prices. White Rebuttal Rpt. at 15. "The damage estimates resulting from this exercise [were] very similar to those resulting from [Professor White's] final prediction equation." July 2, 2007 Tr. at 38. Professor White explained that this "means that the variables that I included in my final prediction equation essentially captured all of the information that otherwise would have been present in those capacity or inventory series."<sup>19</sup> Id.

The Court notes that Professor White's analysis bears no similarity to the expert analysis excluded in In re Aluminum Phosphide Antitrust Litig., 893 F. Supp. 1497 (D. Kan. 1995), a case upon which defendants rely. In that case, the expert "did not perform a regression analysis to address such obvious points as . . . the effect of supply, demand, competition or other factors that might impact price levels during both normative periods." Id. at 1504. The court held that, because the expert's testimony on antitrust damages was "based on unjustified assumptions and does not account for changes in other relevant market conditions, it would not assist a trier of fact to determine the fact or amount of plaintiffs' damages." Id. at 1507. In contrast, in this case, Professor White applied regression analysis to calculate a but-for price that reflected all salient

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<sup>19</sup> Defendants stressed during the Daubert hearing that Professor White did not rerun his model using capacity utilization, but offered nothing to support that doing so would significantly affect Professor White's results. July 2, 2007 Tr. at 182-83; see Bazemore 478 U.S. at 385. The absence of this variable is discussed further in the Court's discussion of the disaggregation of defendants' lawful and unlawful conduct, *supra*.

exogenous factors, such as costs and demand, either directly or indirectly. See Blue Cross and Blue Shield United of Wisconsin v. Marshfield Clinic, 152 F.3d 588, 593 (7th Cir. 1998)

(Posner, J.) (“Statistical studies that fail to correct for salient factors, not attributable to the defendant’s misconduct, that may have caused the harm of which the plaintiff is complaining do not provide a rational basis for a judgment.”).

Accordingly, the Court rejects defendants’ argument that Professor White’s model does not exclude the possibility that exogenous factors such as costs, capacity restraints, or increase in demand caused the alleged overcharge. In this case, that is an issue for the jury to resolve.

## **2. Disaggregation of Lawful and Unlawful Conduct**

According to defendants, there is “no way to isolate the pricing effect of *lawful* conduct from that of unlawful conduct” because Professor White “removed *all* variables that could be affected by Defendants’ conduct - lawful or unlawful.” Reply at 11-12. Defendants argue that Bazemore and its progeny are inapposite to this case because Professor Whites “excludes the most important variables in this case – production and inventory. These variables are at the heart of Plaintiff’s claims. Prof. White’s model does not provide any direct way to connect a change in inventory or production to a change in price.” Memorandum Regarding Authorities Identified by the Court at 2. The Court rejects this argument because, although Professor White’s model does not isolate how any specific change in inventory or production led to a change of price, it isolates defendants’ alleged collusive behavior as the cause of the alleged overcharge.

First, it was appropriate for Professor White to remove all variables that could be affected by defendants’ conduct, lawful or unlawful. As Professor White explained in his rebuttal report,

To correctly estimate the impact of a treatment (the alleged conspiracy) the researcher must be careful to identify factors that affect the outcome of the concern (in our case corrugated container prices) but are not themselves affected by the treatment. Factors



such as interest rates and electricity prices are examples of factors that are not themselves influenced by the alleged conspiracy. The researcher must also identify factors that affect the outcome of concern but *are* affected by the treatment. Inventory levels, market downtime, capacity and capacity utilization are all examples of the latter category. It is well established in the treatment effects literature that the inclusion of variables in this second category introduces bias into the estimation of the effect of interest.

White Rebuttal Rept at 14. See also Gutierrez, 2006 WL 3246605, at \*6 (noting that the expert “specifically chose *not* to include performance in her analyses because performance reviews were under the control of [defendant] and may incorporate discrimination rather than providing a neutral measure of productivity”).

Second, defendants are incorrect in their assertion that, because Professor White’s model was a predictive model rather than a structural model, Professor White cannot isolate defendants’ unlawful behavior as the cause of the alleged overcharge. Professor White testified at length on this issue at the Daubert hearing:

The important distinction here is that the but-for price . . . is constructed as a prediction model. I am not using a structural model for obtaining the but-for price. Nevertheless, there is a crucial and indeed focal structural element to my analysis, and that is the estimation of the effect of the alleged conspiracy by comparing the actual price to this prediction.

\* \* \*

[A] structural model is one that permits the data analysis to reveal the effect of a cause . . . . [M]y model is structural in that it permits me to reveal the effect of a specific cause, that is, the cause of the alleged conspiracy.

\* \* \*

[I]t’s an important distinction to understand where the causality is being measured, that is, the effect of the alleged conduct in the conspiracy period, and where I am not attempting to measure cause and effect, which is in creating the but-for price. . . . [I]t suffices there to make a prediction . . . . [because] I’m being asked to make a prediction under the identical market circumstances during the alleged conduct period, not some set of hypothetical market conditions that might occur . . . . If I were attempting to do that, then I would be concerned about understanding structural elements of the cost-and-demand factors, but that’s not my goal. Because I am making predictions under the identical market conditions except for the presence of the alleged conspiracy, there’s no need to have a structural analysis of the causal effect of each and every cost-and-demand shifter . . . .

\* \* \*

Even though I'm not saying what the effect of each and every cost-and-demand shifter was, I am taking them into account and then I am comparing that to the actual prices that occurred during the alleged conspiracy.

July 2, 2007 Tr. at 107-09.

Finally, the fact that Professor White excluded all variables within the defendants' control, rather than only those variables representing defendants' unlawful conduct, does not imply that Professor White's estimated overcharge may be attributable to non-collusive, lawful behavior on the part of defendants. Professor White testified that he could "rule out all [causal factors underling the alleged overcharge] but the alleged conspiracy by a process of elimination."

Id. at 40. As Professor White elaborated,

The principle of creating a but-for price requires that that prediction not be tainted by conduct associated with the alleged conspiracy. So in order to isolate that conduct that's not impacted by the alleged conspiracy, it's possible to reach back, in other words, go back through the decisions that are under the defendants' control and represent their behavior by the ultimate drivers, the cost and demand factors, that are not under their control or influence. So the cost and demand factors operating in the benchmark period then drive whatever those defendant decisions are as to inventories, downtime, et cetera, the aspects of those that are not contaminated by the alleged conspiracy because it's the benchmark period, as well as driving prices and quantities directly. The net result of that is this total relationship between the cost and demand factors driving prices and quantities. . . . So by being able to use the benchmark period to understand how prices respond to the underlying cost and demand factors I'm able to incorporate, albeit indirectly but also inherently, how decisions as to defendants' choice of inventories or down time or other variables ultimately impact prices and quantities.

Id. at 33-34. Thus, the model inherently accounts for defendants' "[l]awful choices with respect to inventory and down time." Id.

What Professor White is saying is this: It matters not that defendants' lawful conduct was not directly included in the variables that he selected for his regression equation. What matters is that the selected variables resulted in a predicted price during the benchmark period that was almost identical to the actual price in the benchmark period. Defendants' lawful conduct in the

benchmark period was indirectly included through the selection of underlying variables; hence, it was indirectly included in the predicted but-for price in the damages period. That enabled Professor White to opine that the price difference in the damages period was attributable to the collusive conduct of the defendants and not attributable to lawful conduct on the part of defendants.

Accordingly, the Court rejects defendants' argument that there is "no way to isolate the pricing effect of *lawful* conduct from that of unlawful conduct" because Professor White "removed *all* variables that could be affected by Defendants' conduct - lawful or unlawful." Reply at 11-12.

### **3. Segregation of Causal Factors**

Relatedly, defendants argue that Professor White "fails to quantify the degree to which any economic factor—downtime, restricted production, or other—affected prices during the relevant period" and "ignores the timing and quantity of downtime taken . . . ." Mot. at 2. This argument pertains to disaggregation of specific acts alleged to be unlawful, beyond mere disaggregation of defendants' lawful and allegedly unlawful conduct.

The Third Circuit's decision in LePage's Inc. v. 3M, 324 F.3d 141 (3d Cir. 2003), which recognizes that these arguments are interrelated, elucidates that quantifying the particular effect of any single factor is not essential to prove causation of damages in antitrust cases. As in this case, the defendant in LePage's "argue[d] that [plaintiff's expert] improperly failed to disaggregate damages, thereby providing the jury with no mechanism to discern damages arising from [defendant's] lawful conduct or other facts from damages arising from [defendant's] unlawful conduct." Id. at 166. The Third Circuit "noted that it would be extremely difficult, if not impossible, to segregate and attribute a fixed amount of damages to any one act as the theory

was not that any one act in itself was unlawful, but that all the acts taken together showed [an antitrust] violation.” Id. (citing Bonjorno v. Kaiser Aluminum & Chem. Corp., 752 F.2d 802, 812 (3d Cir. 1984)). Accordingly, the Third Circuit ruled that the antitrust defendant’s “actions, taken as a whole, were found to violate [the antitrust laws], thus making the disaggregation that [defendant] speaks of to be unnecessary, if not impossible.” Id. at 166.

Professor White reliably isolated defendants’ alleged collusive behavior “taken together” as the cause of the alleged overcharge; he need not have “segregate[d] and attribute[d] a fixed amount of damages to any one act” or factor in the alleged conspiracy in order to separate defendants’ “lawful conduct . . . from [defendant’s] unlawful conduct.” Id.; see also Rossi, 156 F.3d at 485 (finding it inappropriate to preclude the model even though it did “not deal with the particularized effects of specific injuries, but rather aggregate[d] all . . . damages into one figure”).

Accordingly, the Court rejects defendants’ argument that Professor White “fails to quantify the degree to which any economic factor—downtime, restricted production, or other—affected prices during the relevant period” and “ignores the timing and quantity of downtime taken . . . .” Mot. at 2.

#### **4. Collusion in the Benchmark Period**

During the Daubert hearing, defense counsel argued that Professor White’s testimony should be excluded because he incorrectly assumed that his benchmark period was free of collusion. July 2, 2007 Tr. at 187. The Court rejects this argument.

Professor White explained that “[t]he benchmark period has been taken as a period that represents the presumably lawful, more competitive conduct, which was the basis on which I constructed my but-for price prediction equation.” Id. at 87. The Court approved of this

technique in its class certification opinion. In re Linerboard Antitrust Litig., 203 F.R.D. 197, 218-19 (E.D. Pa. 2001) (“Dr. Beyer stated that he would estimate linerboard prices that would have existed absent the conspiracy based on an analysis of linerboard pricing behavior during a *more competitive* period of time, either before or after the conspiracy.” (emphasis added)).

Professor White elaborated that the benchmark period is “a more competitive period, presumably free of unlawful conduct, but . . . that if it were indeed a period that contained unlawful conduct my but-for price would be higher than would otherwise be the case. . . . [I]f there were some unlawful activity, my but-for price is higher than it would otherwise be and my damage estimate is conservative.” Id. at 87-88. In other words, if there was in fact collusion during the benchmark period, Professor White’s but-for price estimate would be too high, causing his estimate of the overcharge (the difference between actual prices and but-for prices) to be too low.

Accordingly, the Court rejects defendants’ argument that Professor White incorrectly assumed that his benchmark period was free of collusion.

## V. CONCLUSION

The Court concludes that Professor White reliably estimated the alleged overcharge caused by the defendants’ alleged price-fixing conspiracy, and that his methodology fits the facts of this case. “[S]hould the jury find that defendants conspired to fix prices, [Professor White’s] proffered testimony will assist the jury in determining the amount of damages, if any, that plaintiffs incurred as a result of that conspiracy.” In re Indus. Silicon Antitrust Litig., 1998 WL 1031507, at \*4. Accordingly, defendants’ Motion to Exclude is denied.

An appropriate order follows.



Daubert hearing on June 14, 2007 and July 2, 2007, for the reasons set forth in the attached Memorandum, **IT IS ORDERED** that Defendants' Motion to Exclude The Testimony of Prof. Halbert L. White, Jr. (Document No. 893, filed March 23, 2007) is **DENIED**.

**BY THE COURT:**

/s/ Honorable Jan E. DuBois  
**JAN E. DUBOIS, J.**